

# Anti-Human Fibrinopeptid A (Sheep) Affinity Purified IgG 0.5 mg

Ref#: SAFPA-AP  
Lot#: xxxxxx  
Exp. Date: xxxx-xx

Store at -10 to -20°C

For Research Use Only  
Not for Use in Diagnostic Procedures  
For *in vitro* Use Only

<b>Immunogen:</b>	Synthetic fibrinopeptide A $\alpha$ 1-16 conjugated to carrier
<b>Format:</b>	Affinity purified IgG in a buffered stabilizer solution containing 10 mM HEPES, 150 mM NaCl, 50% (v/v) glycerol, pH 7.2
<b>Host:</b>	Sheep
<b>Storage:</b>	Store between -10 and -20°C. Vial should be tightly capped. Do not store in frost-free freezers. Allow product to warm to room temperature and gently mix before use
<b>Total Protein:</b>	0.50 mg
<b>Volume:</b>	1 vial containing 0.250 mL affinity purified IgG on immobilized synthetic FPA peptide
<b>Concentration:</b>	2 mg/mL affinity purified IgG by Absorbance; Extinction Coefficient E <sup>1%<sub>280</sub></sup> = 13.4
<b>Specificity:</b>	Specificity demonstrated by immunoelectrophoresis and ELISA methods
<b>Application:</b>	Suitable as a source of enriched antibodies.

Fibrinogen is an abundant plasma protein (5-10  $\mu$ M) produced in the liver. The intact protein has a molecular weight of 340 kDa and is composed of 3 pairs of disulphide-bound polypeptide chains named A $\alpha$ , B $\beta$  and  $\gamma$ . Fibrinogen is a triglobular protein consisting of a central E domain and terminal D domains. Proteolysis by thrombin results in release of Fibrinopeptide A (FPA, A $\alpha$ 1-16) followed by Fibrinopeptide B (FPB, B $\beta$ 1-14) and the fibrin monomers that result polymerize in a half-overlap fashion to form insoluble fibrin fibrils. The chains of fibrin are referred to as  $\alpha$ ,  $\beta$  and  $\gamma$ , due to the removal of FPA and FPB. The polymerised fibrin is subsequently stabilized by the transglutaminase activated Factor XIII that forms amide linkages between  $\gamma$  chains and, to a lesser extent,  $\alpha$  chains of the fibrin molecules. Proteolysis of fibrinogen by plasmin initially liberates C-terminal residues from the A $\alpha$  chain to produce fragment X (intact D-E-D, which is still clottable). Fragment X is further degraded to non-clottable fragments Y (D-E) and D. Fragment Y can be digested into its constituent D and E fragments. Digestion of non-crosslinked fibrin with plasmin is very similar to the digestion of fibrinogen, which results in production of fragments D and E. Degradation of crosslinked fibrin by plasmin results in fragment DD (D-Dimer consisting of the D domains of 2 fibrin molecules crosslinked via the  $\gamma$  chains), fragment E (central E domain) as well as DDE in which fragment E is non-covalently associated with DD. For human crosslinked fibrin, the relative weights of the cleavage fragments produced are: 184 kDa for fragment DD, 92 kDa for D, 50 kDa for E, 1.54 kDa for FPA and 1.57 kDa for FPB.